

FIG. 1

Parallel Fan Powered VAV Terminal w/ heat Delivery Book

MODEL VERIFICATION		Unit Tag (FPVAV)
		VAV A-4
1. Manufacturer	Submitted	
	Delivered	
2. Model Number	Submitted	
	Delivered	
3. Max/Min Airflow (cfm)	Submitted	/
	Delivered	/
4. Serial Number	Submitted	N/A
	Delivered	
5. Inlet Diameter, inches	Submitted	
	Delivered	
6. Heating MBH/gpm	Submitted	/
	Delivered	/
7. Fan Power/Speed, (hp/rpm)	Submitted	/
	Delivered	/
8. Total Static Pressure, in w.g.	Submitted	
	Delivered	
PHYSICAL CHECKS		
1. The box is free of physical damage	yes / no	
2. The air openings to the box are sealed with durable plastic	yes / no	
3. The airflow sensing tubing is plugged	yes / no	
4. The local electrical disconnect is in the proper location	yes / no	
PHYSICAL CHECKS		
5. The enclosure for the DDC control panel is in the proper location	yes / no	
6. The grommets for the airflow sensing tubing are secure	yes / no	
7. Unit tags affixed	yes / no	
8. Manufacturer's ratings readable/accurate	yes / no	
Tracking Cards		
1. Pull the Appropriate Tracking Card Labeled ----->	VAV A-4	

"No" Responses:	Item	Reason for "No"	Item

FIG. 2

Parallel Fan Powered VAV Terminal w/ heat # _____ [Fill in Tag #]

Hanging

[fill in box number]

Instructions: Step 1: Circle Yes or No, or fill in with requested information.
Step 2: Explain all "No" responses at the bottom of the card.
Step 3: Attach bar code sticker from equipment when finished, return card to your Field Supervisor.

Item	Response
1 Unit identification tag easily visible	Yes No
2 Unit is individually supported from structure and not from adjacent ductwork	Yes No
3 Adequate clearance around control box for maintenance	Yes No
4 Clear access below box to remove bottom access panel for easy maintenance	Yes No
5 Metal to metal connections eliminated to prevent noise problems	Yes No
6 All shipping and installation materials are removed	Yes No
7 Box openings temporarily sealed to maintain system cleanliness	Yes No

"No" Responses 

Item	Reason for "No"

Place Sticker Here

FIG. 3

Parallel Fan Powered VAV Terminal w/ heat # _____ [Fill in Tag #]

Connecting Ductwork

[fill in box number]

Instructions: Step 1: Circle Yes or No, or fill in with requested information.
Step 2: Explain all "No" responses at the bottom of the card.
Step 3: Attach bar code sticker from equipment when finished, return card to your Field Supervisor.

Item	Response
1 Balancing damper present on inlet duct	Yes No
2 1 1/2 diameters of straight ductwork installed prior to VAV box damper	Yes No
3 Ductwork free of transitions for at least 36"	Yes No
4 Maintainable items (actuators, dampers, sensors, etc.) are accessible for easy maintenance	Yes No
5 Flexible connector (vibration isolator) installed on inlet duct to avoid noise problems from metal to metal contact	Yes No
6 Flex duct is installed in a way that avoids forming kinks on both inlet and outlet ductwork	Yes No

"No" Responses 

Item	Reason for "No"

Place Sticker Here

FIG. 4

Parallel Fan Powered VAV Terminal w/ heat # _____ [Fill in Tag #]

Piping Installation

[fill in box number]

Instructions: Step 1: Circle Yes or No, or fill in with requested information.

Step 2: Explain all "No" responses at the bottom of the card.

Step 3: Attach bar code sticker from equipment when finished, return card to your Field Supervisor.

Item	Response	
	Yes	No
1 Piping is fully supported		
2 Control valve and maintainable items are accessible		
3 The following components are installed, from supply line to return line:	Yes	No
4 Ball valve		
5 Union-Coil-Union		
6 Manual air vent		
7 Pete's Plug		
8 2-way automatic control valve		
9 Manual drain valve		
10 Manual flow meter valve		

"No" Responses



Item	Reason for "No"

Place Sticker Here

FIG. 5

Parallel Fan Powered VAV Terminal w/ heat # _____ [Fill in Tag #]

Controls Installation

[fill in box number]

Instructions: Step 1: Circle Yes or No, or fill in with requested information.

Step 2: Explain all "No" responses at the bottom of the card.

Step 3: Attach bar code sticker from equipment when finished, return card to your Field Supervisor.

Item	Response	
	Yes	No
1 Point-to-point connections of control wiring verified		
2 Temperature sensor calibration verified		
3 Central system accurately represents conditions of VAV box	Yes	No

"No" Responses



Item	Reason for "No"

Place Sticker Here

FIG. 6

Parallel Fan Powered VAV Terminal w/ heat # _____ [Fill in Tag #]											
Electrical											
[fill in box number]											
Instructions: Step 1: Circle Yes or No, or fill in with requested information. Step 2: Explain all "No" responses at the bottom of the card. Step 3: Attach bar code sticker from equipment when finished, return card to your Field Supervisor.											
<table border="1"><thead><tr><th>Item</th><th>Response</th></tr></thead><tbody><tr><td>1 Local disconnect installed in accessible location</td><td>Yes</td></tr><tr><td>2 Variable speed selector switch is operational</td><td>Yes</td></tr><tr><td>3 Motor rotation in proper direction</td><td>Yes</td></tr><tr><td>4 P.E. switch is operational</td><td>Yes</td></tr></tbody></table>		Item	Response	1 Local disconnect installed in accessible location	Yes	2 Variable speed selector switch is operational	Yes	3 Motor rotation in proper direction	Yes	4 P.E. switch is operational	Yes
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1 Local disconnect installed in accessible location	Yes										
2 Variable speed selector switch is operational	Yes										
3 Motor rotation in proper direction	Yes										
4 P.E. switch is operational	Yes										
<p>"No" Responses </p> <table border="1"><thead><tr><th>Item</th><th>Reason for "No"</th></tr></thead><tbody><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></tbody></table>		Item	Reason for "No"								
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Place Sticker Here											

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FIG. 7

Parallel Fan Powered VAV Terminal w/ heat Contractor Book

Controls Start-up		VAV A-4
1. Cooling/heating (when present) sequence of control correct	yes / no	
2. Warm-up/cool-down sequence of control correct	yes / no	
3. Unoccupied sequence of control correct	yes / no	

"No" Responses:

Item	Reason for "No"	Item

Place Sticker Here

FIG. 8

Parallel Fan Powered VAV Terminal w/ heat Contractor Book

TAB		VAV A-4
1. Modifying unit/system settings through temperature sensor working	yes / no	
2. Airflow sensor calibration verified	yes / no	
3. Minimum airflow, cfm (design/measured)	/	
4. Maximum airflow, cfm (design/measured)	/	

"No" Responses:

Item	Reason for "No"

Place Sticker Here

FIG. 9

 <p>VAV Terminal w/ heat VAV A-4 Controls Start-up</p>	 <p>VAV Terminal w/ heat VAV A-4 TAB</p>	 <p>VAV Terminal w/ heat VAV A-4 Delivery Book</p>
 <p>VAV Terminal w/ heat VAV A-4 Hanging</p>	 <p>VAV Terminal w/ heat VAV A-4 Connecting Ductwork</p>	 <p>VAV Terminal w/ heat VAV A-4 Piping Installation</p>
 <p>VAV Terminal w/ heat VAV A-4 Controls Installation</p>	 <p>VAV Terminal w/ heat VAV A-4 Electrical</p>	

FIG. 10

Piping Installation

Date: _____

[fill in current date]

Instructions: Step 1: Circle Yes or No, or fill in with requested information.

Step 2: Explain all "No" responses at the bottom of the card.

Step 3: Describe work completed today and return card to your Field Supervisor.

Item	Task Description	Response
1	Piping is clean and free of damage prior to installation	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2	Maximum support spacing is according to table on back, or closer as necessary	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
3	All connections meet specification requirements	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
4	All equipment requiring maintenance is accessible (valves, junction boxes, etc.)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
5	All pipe openings temporary sealed to maintain duct system cleanliness	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
6	Record drawings have been updated to reflect any changes made	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

"No" Responses



Item	Reason for "No"

Briefly Detail Work Completed Today

FIG. 11

Ductwork Installation

Date: _____

[fill in current date]

Instructions: Step 1: Circle Yes or No, or fill in with requested information.

Step 2: Explain all "No" responses at the bottom of the card.

Step 3: Describe work completed today and return card to your Field Supervisor.

Item	Task Description	Response
1	Ductwork is clean and free of damage prior to installation	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2	There are supports every 6 feet, or less as required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
3	All latitudinal and longitudinal joints are sealed (<1% leakage required)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
4	All equipment requiring maintenance is accessible (valves, junction boxes, etc.)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
5	All duct openings temporary sealed to maintain duct system cleanliness	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
6	Record drawings have been updated to reflect any changes made	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

"No" Responses



Item	Reason for "No"

Briefly Detail Work Completed Today

FIG. 12

VAV Terminal Construction Checklist

XYZ Corporate Headquarters
Equipment Number: VAV A-1

1) Model Verification

A	Data to Verify:	Specified	Submitted	Installed
Manufacturer				
Model				
CFM (Max/Min)	/	/	/	
Serial Number				
Inlet Diameter, inches				
Heating MBH/gpm				
Fan Power, hp				
Total Static Pressure, psig				

2) Pre-Installation Checks

The following must be completed upon delivery of equipment to the work-site.

		Contractor	Initials	SGH
A	Physical Checks	Mechanical		
	There is no physical damage to the box	yes / no		
	The air openings to the box are sealed with durable plastic	yes / no		
	The airflow sensing tubing is plugged	yes / no		
	The local disconnect is in the proper location	yes / no		
	The enclosure for the DDC control panel is in the proper location	yes / no		
	The grommets for the airflow sensing tubing are secure	yes / no		
	Unit tags affixed	yes / no		
B	Component Verification	Mechanical		
	Manufacturer's ratings are readable	yes / no		
	Manufacturer's ratings are accurate	yes / no		

FIG. 13

3) Physical Installation Checks

The following items need to be verified during installation. Fill in blanks with a checkmark, specific information, or circle "yes" or "no". For any negative responses, complete section 4.

		Contractor	Initials	Comments
A	Hanging of Box	Mechanical		
	Unit, damper, and air valve tags affixed	yes / no		
	Unit secured as required in specifications	yes / no		
	Adequate clearance around controls for O&M			
	6" clearance in front of air valve for travel of inner valve rod	yes / no		
	1 1/2 duct diameters before the air valve	yes / no		
	No duct transitions upstream of box for 30"	yes / no		
	No obstructions below box to remove bottom access panel	yes / no		
	Vibration isolators in good condition	yes / no		
	No metal to metal connections to cause noise problems	yes / no		
B	Box properly labeled (box tag easy to see)	yes / no		
	Ductwork - Primary Air Inlet	Mechanical		
	Primary ductwork all hard or maximum flex duct length of 1 foot	yes / no		
	All inlet elbows long radius and no kinks in flex duct	yes / no		
	1 1/2 duct diameters prior to air valve	yes / no		
	No transitions upstream for at least 36"	yes / no		
	Record drawings accurate	yes / no		
	Vibration isolator if flex duct is not used	yes / no		
C	Does not interfere with accessibility	yes / no		
	Ductwork - Outlet	Mechanical		
	Vibration isolator in place with no holes	yes / no		
	No kinks in flex duct	yes / no		
D	Record drawings accurate	yes / no		
	Controls	Controls		
	Control wiring hooked up	yes / no		
	Temperature sensor hooked up	yes / no		
	Communication with central system	yes / no		
	Temperature sensor calibrated	yes / no		
	Cooling sequence of control correct (should be attached)	yes / no		
	Heating sequence of control correct (should be attached)	yes / no		
	Warm-up sequence of control correct (should be attached)	yes / no		
	Cool down sequence of control correct (should be attached)	yes / no		
	Unoccupied sequence of control correct (should be attached)	yes / no		

Fig. 14

E	Testing and Balancing (TAB)	TAB	
	Modifying unit / system settings throughout temperature sensor working	yes / no	
	Airflow sensor calibrated	yes / no	
	Actual min / max airflow (cfm)	/	

4) Negative Responses

For each negative response in sections 2 and 3, record the reason and resolution below. Attach extra sheets as necessary.

Fig. 15

